

I claim:

1. In a programmed system having a memory, a method for conducting an electrophysiology procedure using one or more catheters at least one of which includes: one or more first means supported on the catheter for obtaining physiologic data; and one or more second means for obtaining location data concerning a location of the first means when the catheter is positioned indwelling, the method comprising the steps of:
  - a) displaying the location data obtained by the second means in a first window;
  - b) displaying the physiologic data obtained by the first means in a second window;
  - c) freezing the first and second windows to a first moment in time during the electrophysiology procedure in response to operator action;
  - d) disassociating in the memory of the programmed system any physiologic data from location data for any moment in time other than the first moment in time; and
  - e) creating a set of data points for display in the first window, each data point associating the physiologic data obtained by each first means at the first moment in time with the location data obtained by the second means at the first moment in time.
2. The method of claim 1, wherein the first window and the second window are active panes presented on a single display.

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6. The method of claim 5, including the further step of displaying in the first window a map of the locations visited during the course of the electrophysiology procedure using the obtained location data for a plurality of index values.

5 7. In a programmed system, a method for managing discrete data capture requests received throughout the course of an electrophysiology procedure, comprising the steps of:

- 10 a) obtaining physiologic data from sites adjacent one or more locations of a catheter distal tip portion;
- b) obtaining location data concerning a location of each of said sites;
- c) providing an index value in response to a request, at any given point in time, to capture the data obtained from steps (a) and (b);
- d) associating in a first memory the obtained physiologic data with the index value;
- 15 e) associating in a second memory the obtained location data with the index value;
- f) updating the index value prior to repeating steps (c) through (e); and
- g) displaying in a first window a map of the locations visited during the course of the electrophysiology procedure using the obtained location data for a plurality of index values.
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8. The method of claim 7, including the further steps of:

creating a set of data points for display in the first window, the data points associating the physiologic data stored in the first memory with the location data stored in the second memory for any one of said any given points in time; and displaying the set of data points in the first window.

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9. The method of claim 8, including the additional step, prior to the creating step, of retrieving one of the physiologic data from the first memory and the location data from the second memory using the index value, whereby the set of data points displayed in the first window includes physiologic data that was captured at one particular point in time during the course of the electrophysiology procedure.

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10. The method of claim 9, wherein the association of the physiologic data stored in the first memory with the location data stored in the second memory for any one of said any given points in time is made in a memory segment, the method including the additional step, prior to the retrieving step of:

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disassociating the physiologic data from the location data in the memory segment.

11. The method of claim 9, wherein the index value used to retrieve the physiologic data is selected by the user.

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12. The method of claim 11, wherein the first window comprises one or more panes, each having a user-selectable tab to activate a given pane and wherein the index value is selected using the user-selectable tab.

5 13. The method of claim 11, including the additional step of permitting the user to select from the map a location that was visited, wherein the retrieving step retrieves the physiologic data from the first memory using the index value associated with the selected location.

10 14. The method of claim 13, including the additional steps of:  
 permitting the user to select from the map a set of locations that were visited;  
 and  
 storing the set of locations,  
 wherein the retrieving step sequentially retrieves the physiologic data for each  
 15 selected location in the set of locations.

15. The method of claim 14, wherein the sequentially retrieval is in the order that the locations were selected.

20 16. The method of claim 14, wherein the retrieving step loops through the locations until interrupted.

17. The method of claim 14, wherein the retrieving step has a speed and wherein the speed that data points are displayed for said any given points in time is adjustable.
18. The method of claim 9, wherein the index value used to retrieve the physiologic data is selected by a program executing in the programmed system.
19. In a programmed system, a method for managing discrete data capture requests received throughout the course of an electrophysiology procedure, comprising the steps of:
- a) in response to a user request to capture data at any given point in time during the course of the electrophysiology procedure,
    - i) associating in a first memory an index value with physiologic data obtained from sites adjacent one or more locations of a catheter distal tip portion at the given point in time; and
    - ii) associating in a second memory the index value with location data obtained concerning a location of each of said sites at the given point in time;
  - b) utilizing the index value to associate in a memory segment of the programmed system the physiologic data in the first memory with the location data in the second memory;
  - c) creating a set of data points for display in a first window using the information in the memory segment;

- d) displaying the set of data points in the first window; and
- e) disassociating the physiologic data from the location data in the memory segment for any index value other than the utilized index value;

whereby the set of data points displayed in the first window show

5        physiologic data for only one particular point in time during the course of the electrophysiology procedure at any moment.

20.     The method of claims 19, wherein the index value of the utilizing step is selected by a program executing in the programmed system.

10       21.     A method for discretizing the display of independent data capture events that occur during the course of an electrophysiology procedure, comprising the steps of:

- a)       utilizing an index value to associate in a memory segment of the programmed system physiologic data in a first memory with location data in a second memory;
- 15       b)       creating a set of data points for display in a first window using the information in the memory segment;
- c)       displaying the set of data points in the first window; and
- d)       disassociating the physiologic data from the location data in the memory segment for any index value other than the utilized index value;
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whereby the set of data points displayed in the first window show physiologic data for only one particular point in time during the course of the electrophysiology procedure at any moment.

5        22.    The method of claims 19 or 21, wherein the index value is selected by the user.

23.    The method of claim 22, wherein the first window comprises one or more panes, each having a user-selectable tab to activate a given pane and wherein the index value is selected using the user-selectable tab.

10       24.    The method of claims 19 or 21, wherein the first window further displays a map of the locations visited during the course of the electrophysiology procedure for a plurality of index values.

15       25.    The method of claim 24, including the additional step of permitting the user to select from the map a location that was visited, the selecting step causing the index value associated with the selected location to be utilized in steps (a) through (d).

20       26.    The method of claim 25, including the additional steps of:

              permitting the user to select from the map a set of locations that were visited;

              and

              storing the set of locations,



wherein the selecting step sequentially causes the index value associated with each selected location to be utilized in steps (b) through (d).

27. The method of claim 26, wherein the order that the locations were selected governs the sequential utilization of index values.

28. The method of claim 27, wherein the sequential utilization of index values has a speed and wherein the speed that data points are displayed for said any given points in time is adjustable.

29. The method of claims 19 or 21, wherein the memory segment is part of at least one of the first and second memories.

30. The method of claim 21, wherein the index value of the utilizing step is selected by a program executing in the programmed system.

31. The method of claims 18, 20 or 30, wherein the program executing in the programmed system includes the step of automatically selecting physiologic data to be retrieved in accordance with at least one predetermined criterion.

32. The method of claim 31, wherein the at least one predetermined criterion is an earliest activation time.

33. The method of claim 31, wherein the program executing in the programmed system includes the additional steps of sorting the physiologic data to be retrieved in accordance using one of said at least one predetermined criterion, and selecting the physiologic data after the sorting step.

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34. The method of claim 31, wherein the program executing in the programmed system includes the additional steps of defining a subset of the physiologic data to be retrieved in accordance using one of said at least one predetermined criterion, and selecting the physiologic data after the defining step.

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35. The method of claims 1, 4, 7, 19 or 21, wherein the first window comprises one or more panes, each having a user-selectable tab to activate a given pane.

36. The method of claim 35, wherein only one of the panes is active at a time.

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37. The method of claim 36, including the additional steps of permitting a user to select which of the panes is to be active.

38. The method of claim 35, wherein each pane has a transparent background permitting other panes to be viewed therethrough.

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39. The method of claim 35, wherein only one of the panes is active at a time and wherein the active pane has an opaque background.
40. The method of claim 39, wherein the active pane is displayed in the foreground of the first window thereby precluding other panes from being viewed.
41. The method of claims 1, 5, 7, 19 or 21, wherein the physiologic data undergoes processing prior to being displayed.
42. The method of claims 3, 7, 19 or 21, wherein the index value is one of a snapshot number and a time stamp.
43. The method of claims 4, 8, 19 or 21 wherein the step of creating a set of data points comprises populating a physiologic data property of a displayable software object with physiologic data from the first memory.